

### REMARKS

The Applicant appreciates the courteous and complete examination of the application by the Examiner. In view of the foregoing amendments and the following remarks, a reconsideration of the instant application is respectfully requested.

In order to expedite the prosecution of this application, claim 9 has been canceled without prejudice or disclaimer of the subject matter thereof, in favor of Applicant's right to pursue the cancelled claims in a continuing application filed at a later date, thereby permitting the remaining allowed claims to issue as a patent. Claims 1, 10, 12, 18 and 19 have been amended to more completely cover certain aspects of the Applicant's invention. Claims 1-8 and 10-19 are now in this application.

#### Regarding the Drawings

The Examiner objected to the drawings under 37 CFR 1.83(a) for not showing every feature of the invention specified in the claims, specifically the "material aggregate extending parallel to the longitudinal axis of the hub".

A new drawing sheet 5 is submitted which contains new Figs. 9 and 10. New Fig. 9 illustrates the material aggregated parallel with the longitudinal axis of the hub, as requested by the Examiner in the above-identified office action.

New Fig. 10 illustrates the axially running recess for all the embodiments of the present invention. Support of which is found in paragraphs 0033 and 0052 of the present published application as originally filed, and claim 15 as originally claimed. Paragraph 0033 discloses the recess "which extends at least over the length of the section A2 and A3 of the hub", and paragraph 0052 discloses "also the half conical angle K1 for the section A2 as well as the diameter D1 and D2 of sections A2 or A3 can be recognized". K1 being the conical angle of subsection A2' which contains the two subsections of the insertion area (see Fig. 2 of the present application). Figs. 7 and 8 and paragraphs 0053 and 0054 of the published application disclose the section A2 as having a curved profile, thereby linking the curved profile embodiment with the recess extending over "section A2" as disclosed in preceding paragraphs 0033 and 0052.

Additionally, since original claim 15 depended from claims 1-14, with claims 4 and 5 being directed to the insertion area having "a curved profile" and claim 7 being

directed to the insertion area having "two subsections", then the recess in claim 15 was originally disclosed for all embodiments of the insertion area. It can be appreciated that there is sufficient disclosure of the recess in the original application to support new Fig. 10 and it is therefore respectfully believed that no new matter has been entered.

The Applicant respectfully submits replacement drawing sheets 1-4 which corrects all informalities in Figs. 1-8 and which complies with 37 CFR 1.84.

### **Regarding the Specification**

The Applicant appreciates the opportunity to amend the specification. Two new paragraphs have been added after paragraph 0047 in the Brief Description of the Drawings section which describes the new Figs. 9 and 10 of new drawing sheet 5.

### **Regarding the Claim Objections**

The Examiner objected to claim 12 because of informalities. Claim 12 has been amended to describe the subsections as "first" and "second", as requested by the Examiner.

### **Regarding the § 112 Claim Rejections**

The Examiner rejected claim 15 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states that the "drawings only show a recess with respect to Figures 5 and 6, which do not have two subsections". New Fig. 10 has been submitted which illustrates the limitations of claim 15, thereby making claim 15 definite and clear.

### **Regarding the § 102 Claim Rejections**

The Examiner rejected claims 1-6, 8 and 19 under 35 U.S.C. 102(b) as being anticipated by Matt. The Examiner states that the Matt reference discloses a first cylindrical section "(unnumbered first portion of the 6, even though the portion is part of the tapered section", and further states in the Response to Arguments section of the

above-identified office action that the first cylindrical section of Matt is “the first portion of the tapered section”. It is believed that the Examiner is using the “first portion of the tapered section” (Fig. 3 of Matt) as inherently being a first cylindrical section.

*With regard to independent claims 1 and 19:*

The Matt reference does not disclose, teach or suggest a first cylindrical section as an independent and separate element to the funnel-like widening element (6) of Matt. Claims 1 and 19 have been amended to further limit the first cylindrical section as having a specific length in reference to the hub. The length of the first cylindrical section removes it as being just an opening or a “first portion of the tapered section”.

The “first portion of the tapered section” (6) in the Matt reference is not a cylindrical section that extends into the hub with a specific length but an opening with no length and is therefore not a separate and independent element. It can therefore be appreciated that the limitation in claims 1 and 19 of “the length of the first cylindrical section is about 2 % to 30 % of the entire length of the hub” is structurally different to the Matt reference in that the “first portion of the tapered section” of Matt does not extend into the hub as a cylindrical section.

The Applicant respectfully points out that “The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531,1534,28 USPQ2d 1955, 1957 (Fed.Cir.1993)”, see MPEP §2112(IV). It is believed that the Examiners anticipation rejection of the first cylindrical section limitation in claims 1 and 19 based upon inherency or modification of Matt is in error. The Examiner states that “unnumbered first portion of the 6”, and by this admission it is believed that Matt does not disclose a first cylindrical section since Matt cannot number a section that is not disclosed or illustrated. Therefore, since the Matt reference does not disclose, teach, or suggest the structure or use of a first cylindrical section extending into the hub a specific length, that the structure relied upon by the Examiner may be a handle, and that MPEP §2112(IV) states that if a characteristic may occur or be present in the prior art is not sufficient to establish inherency, then it is respectfully concluded and proven that the handle limitation in claims 1 and 19 is not inherently found in the Matt reference and that claims 1 and 19 is in condition for allowance.

The Applicant further points out that inherency may not be established by probabilities or possibilities, and by the mere fact that a certain thing may result from a given set of circumstances is not sufficient. See *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed.Cir.1999), wherein the courts ruled that a claimed invention having three separate elements and the prior art reference has two elements was held that the reference did not disclose a separate third element, either expressly or inherently. With this in mind, the "first portion of the tapered section" of the Matt reference can not be used to inherently anticipate the first cylindrical section in claims 1 and 19 because the first cylindrical section is a claimed separate element that overcomes a disadvantage of Matt. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. See *In re Runion*, 1993 U.S. App. Additionally, the principle of inherency is a question of fact, and that an inherent property used in an anticipation rejection has to flow naturally from what is taught in a reference. See *Stoller v. Ford Motor Co.*, 1991 U.S. App. LEXIS 1084; 18 U.S.P.Q.2D (BNA) 1545. Additionally, MPEP 2131 states "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Additionally, the Applicant respectfully points out that the Examiner should rely upon the decision of *Net MoneyIN, Inc. v. VeriSign, Inc.*, No. 2007-1565 at 8 (Fed.Cir. Oct. 20, 2008), which the Federal Circuit held that, for a prior art reference to anticipate a claim, each and every claimed element must be "arranged and combined in the same way" in the prior art reference.

The Applicant further requests that the Examiner reconsiders his rejections of the invention in view of the well established principle that small differences in a crowded art can constitute patentable improvement. See *In re Baum*, 51 USPQ 470 (CCPA 1941) and *In re Lange*, 126 USPQ 365 (CCPA 1960). In considering this principle, the Applicant would also request that the Examiner take note to the court decision which notes that "apparent simplicity has been held to furnish strong argument for patentability where, as here, a need has existed for a structure of the nature disclosed and claimed. The fact that a solution to a problem is simple, or appears to be simple when viewed in

retrospect, does not mean that the solution was obvious when it was conceived." See *Ellipse corp. v. Ford Motor Co.*, 171 USPQ 513.

Claims 2-6 and 8 are felt to patentably distinguish over the prior art references because of their above-mentioned dependency from amended claim 1.

*With regard to claims 4 and 5:*

The Matt reference does not disclose, teach or suggest the insertion area (tapering widening 6) as being a curved profile. The Examiner states in the Response to Arguments section of the above-identified office action that "Figure 2 shows that the insertion area has a curved profile. This limitation is broadly recited". Figure 2 in the Matt reference is a "front view of the forged cam", and therefore does not illustrate any internal profiles of the insertion area. The Applicant respectfully believes the Examiner is in error by broadly interpreting this limitation. The Matt reference specifically discloses the insertion area (6) as a funnel shape formed by a cone or planar surface (col. 4, lines 19-24). It can clearly be appreciated that a cone and a planar surface cannot produce a curved profile. Furthermore, claims 4 and 5 do not broadly claim the curve limitation. It can be appreciated that claim 4 specifically limits the curve profile as being "formed from circular segments with different radii placed on one another, and whereby the radii of the circular segments are smaller toward the first cylindrical section", and claim 5 specifically limits the curve profile as being "formed by an arch, which discontinuously connects to the first cylindrical section and opens discontinuously or continuously into the second cylindrical section".

Therefore, since Matt does not disclose, teach or suggest the insertion area having a curved profile, then Matt does not anticipate claims 4 and 5 and is believed to be patentably distinct therefrom.

*With regard to claim 8:*

The Examiner rejects the limitations of claim 8 with reference to Fig. 6 of Matt. The Applicant respectfully believes that the Examiner may be in error with the rejection to claim 8 since it depends from claim 7 which is not anticipated by Matt. Therefore

claim 8 includes all the limitations of claim 7 and is believed to not be anticipated by Matt.

The Examiner rejected claims 1-8 and 19 under 35 U.S.C. 102(b) as being anticipated by Leuthold. The Examiner states that the Leuthold reference discloses a first cylindrical section "(unnumbered first portion of the 7, even though the portion is part of the tapered section)". It is believed that the Examiner is using the "first portion of the tapered section" (Fig. 6 of Leuthold) as inherently being a first cylindrical section.

*With regard to independent claims 1 and 19:*

The Leuthold reference does not disclose, teach or suggest a first cylindrical section as an independent and separate element to the outer conical extent (7) of Leuthold. Claims 1 and 19 have been amended to further limit the first cylindrical section as having a specific length in reference to the hub. The length of the first cylindrical section removes it as being just an opening or a "first portion of the tapered section".

The "first portion of the tapered section" (7) in the Leuthold reference is not a cylindrical section that extends into the hub with a specific length but an opening with no length and is therefore not a separate and independent element. It can therefore be appreciated that the limitation in claims 1 and 19 of "the length of the first cylindrical section is about 2 % to 30 % of the entire length of the hub" is structurally different to the Leuthold reference in that the "first portion of the tapered section" of Leuthold does not extend into the hub as a cylindrical section.

The Applicant respectfully directs the Examiner to the above arguments toward the Matt reference since they are applicable toward the Leuthold reference.

Claims 2-8 are felt to patentably distinguish over the prior art references because of their above-mentioned dependency from amended claim 1.

*With regard to claims 4 and 5:*

The Leuthold reference does not disclose, teach or suggest the insertion area (outer conical extend 7) as being a curved profile. The Examiner makes reference to

Fig. 2 of Leuthold. Figure 2 in the Leuthold reference is a front view of a single cam, and therefore does not illustrate any internal profiles of the insertion area (7).

The Applicant respectfully believes the Examiner is in error by broadly interpreting this limitation. The Leuthold reference specifically discloses the insertion area (7) as an outer "conical" extent, and that the insertion section (5) is "funnel-shaped" (col. 1, line 47). It can clearly be appreciated, by definition, that a conical extent that is funnel-shaped cannot produce a curved profile since a cone is generated by a straight line passing through a fixed point and moving along a fixed curve. Furthermore, claims 4 and 5 do not broadly claim the curve limitation. It can be appreciated that claim 4 specifically limits the curve profile as being "formed from circular segments with different radii placed on one another, and whereby the radii of the circular segments are smaller toward the first cylindrical section", and claim 5 specifically limits the curve profile as being "formed by an arch, which discontinuously connects to the first cylindrical section and opens discontinuously or continuously into the second cylindrical section".

Therefore, since Leuthold does not disclose, teach or suggest the insertion area having a curved profile, then Leuthold does not anticipate claims 4 and 5 and is believed to be patentably distinct therefrom.

### **Regarding the § 103 Claim Rejections**

The Examiner rejects claims 9-14 and 16-18 under 35 U.S.C. 103(a) as being unpatentable over Leuthold. The Examiner states that it would have been obvious "to determine the optimum range of the point of first contact, the length of the first cylindrical section, the length of the second cylindrical section, and the ration of length of the insertion area", and that "discovering the optimum or workable ranges involves only routine sill in the art".

*With regard to claims 9-14, 16 and 17:*

The Applicant respectfully rebuts the *prima facie* case of obviousness. The Leuthold reference does not disclose a first cylindrical section and therefore no length can be provided, thereby teaching away from the present claimed invention. The Leuthold reference only discloses the length (10) of the outer conical extend (7) as being 0.09 the thickness of the cam (2). Since Leuthold specifically discloses this

length and not others then it would not have been obvious to one skilled in the art to have a first cylindrical section with the claimed specific length. This lack of a first cylindrical section further shows a teaching away from the claimed present invention, and by the Examiners own admission, in that Leuthold does not number this area while numbering the length (10) of the outer conical extent (7). This teaching away from the claimed present invention incurs a major disadvantage in the Leuthold reference in that with pressing on of the cam (2) onto the core (1), already at the beginning of the cam opening via the outer conical extend (7), a force effect acts on the cam, and so tensioning in the cam material can occur which produces microscopic tears, as discussed in more detail herewithbelow. The claimed present invention solves this "long felt unsolved need" of preventing microscopic tears or deformations by having a first cylindrical section of specific length which avoids a direct effect of force between the base body on which the hub is to be placed and the hub in the region of the front face. This is due to the fact that the deformation of the material aggregate on the shaft starts first in the tapered insertion region upon pressing-on of the hub on the base body. Since there is a "long felt unsolved need" for the claimed present invention then it is believed that the Leuthold reference does not show a *prima facie* case of obviousness. *Graham v. John Deere Co.*, 383 U.S. at 17, 148 USPQ at 467, see MPEP 2145. In addition, since Leuthold teaches away from the claimed present invention then it is believed that the Leuthold reference does not show a *prima facie* case of obviousness. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997)

Additionally, the claimed present invention discloses that the particular range is critical, "generally by showing that the claimed range achieves unexpected results relative to the prior art range." The Leuthold reference does not disclose a length range for a first cylindrical section "unnumbered first portion of 7" and therefore the claimed "first cylindrical section" produces an unexpected result in that the material aggregate first deformation starts in the hub at the tapered insertion section which is subsequent to the first cylindrical section at about "2 % to 30 % of the entire length of the hub". Since there is an unexpected result from the claimed present invention then it is believed that the Leuthold reference does not show a *prima facie* case of obviousness. *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).



The Leuthold invention has a major disadvantage in that with pressing on of the cam (2) onto the shaft (core 1), already at the beginning of the cam opening via the outer conical extent (7), a force effect acts on the cam, and so tensioning in the cam material can occur. This tensioning leads to microscopic tears in the structure and can cause a weakening or collapse of the attachment operation, and hence can cause functional destruction of the shaft based on the deformation. This tensioning leads to microscopic tears in the structure and can cause a weakening or collapse of the attachment operation, and hence can cause functional destruction of the shaft based on the deformation.

The claimed present invention overcomes this disadvantage by making a hub for pressing onto a base body, whereby the hub has a hub opening, defined by hub front faces, and whereby the hub has an insertion area tapering in the press-on direction P. The hub opening is characterized by the "first cylindrical section" having a specific length extending into the hub, which is not disclose, taught or suggested by Leuthold. The hub, as in claims 1 and 18, each have "a first cylindrical section" of the hub opening, whose diameter is at least the same size as the largest diameter of the base body. Such a diameter permits a simple placing of the hub on the base body avoiding the existing connection strains in the region of the front face. This "first cylindrical section" is different from the "first portion of the tapered section" (7) of Leuthold. The first cylindrical section of claims 1 and 18 avoids a direct effect of force between the base body on which the hub is to be placed and the hub in the region of the front face. This is due to the fact that the deformation of the material aggregate on the shaft starts first in the tapered insertion region upon pressing-on of the hub on the base body. Thus the connection strains in the cylindrical section are avoided preventing microscopic tears or deformations in the body which supports the hub. It can clearly be appreciated that the material aggregate (3) of Leuthold makes direct contact with the "first potion of the tapered section" (7) located at the end face first, which is substantially different than the present invention in claims 1 and 18.

Furthermore, as the Supreme Court recently explained "a patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S., 82

U.S.P.Q.2d 1385, 1396 (2007). Moreover, “[r]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.* (citing *In re Kahn*, 441 F. 3d 977, 988 (Fed. Cir. 2006) cited with approval in KSR). “To facilitate review, this analysis should be made explicit.” *Id.* Furthermore, “[a] factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon ex post reasoning. See *Graham*, 383 U. S., at 36 (warning against a ‘temptation to read into the prior art the teachings of the invention in issue’ and instructing courts to ‘guard against slipping into the use of hindsight’ (quoting *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F. 2d 406, 412 (CA6 1964))).” *Id.* at, 82 U.S.Q.P.2d at 1397.

Claim 9 has been cancelled and the limitations of which have been amended into claim 1. Claims 10-14, 16 and 17 are felt to patentably distinguish over the prior art references because the Applicant believes that there is no *prima facie* case of obviousness because the Leuthold reference teaches away from the claimed present invention, that there is a long felt unsolved need for the claimed invention, and that the claimed present invention achieves unexpected results. Furthermore, 10-14, 16 and 17 are felt to patentably distinguish over the prior art references because of their above-mentioned dependency from amended claim 1.

*With regard to claim 18:*

Claim 18 has been amended to include a “recess extending over the entire length of the hub, whereby the recess defines a part of the periphery of the hub opening and the recess extends radially outward at a maximum to the diameter”. This limitation is not disclosed, taught or suggested in Leuthold.

## **Conclusion**

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, the Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to

facilitate expeditious prosecution of this application. The Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that the Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Applicant has endeavored to address all of the Examiner's concerns as expressed in the Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of patentability of the pending claim set are presented above. Any claim amendments which are not specifically discussed in the above-remarks are made in order to improve the clarity of claim language, to correct grammatical mistakes or ambiguities, and to otherwise improve the clarity of the claims to particularly and distinctly point out the invention to those of skill in the art. Finally, Applicant submits that the claim limitations above represent only illustrative distinctions. Hence, there may be other patentable features that distinguish the claimed invention from the prior art.

With the above amendments being fully responsive to all outstanding rejections and formal requirements, it is respectfully submitted that the claims are now in condition for allowance, and a notice to that effect is earnestly solicited. Should the Examiner feel that there are further issues which might be resolved by means of telephone interview, the Examiner is cordially invited to telephone the undersigned at (403) 444-5695, or email at davidguerra@internationalpatentgroup.com

No additional fee is due.

Respectfully Submitted,

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